

### **REMARKS**

Claims 1-2, 4-10, 12-14, are pending in the Application. Claims 3 and 11 have been canceled without prejudice. Claims 1, 4, 9, 12, 13 are currently amended. Support for the amendment to claim 1 can be found in original claim 3. Claim 1 was also amended to correct a typographical error. Support for the amendment to claim 9 can be found in original claim 11. Claims 4, 12, and 13 have been amended to depend on pending claims. Reconsideration and allowance of Application based on the following remarks are respectfully requested.

#### **Claim Rejections – 35 U.S.C. §103**

Claims 1-3, and 5-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lam et. al U.S. Pat. 5,940,429 (“Lam”) in view of Preuss et al. U.S. Pat. 5,319,735 (“Preuss”). Applicants respectfully traverse the rejection in view of the amendments to claims 1 and 9, and the following arguments.

The Office Action admits that Lam failed to disclose delaying the original audio signal prior to inputting it to element 104 of Fig. 5(b) of Lam. The Office Action asserts that Preuss teaches that in order to compensate for delays introduced by various processing steps in a signal embedding system, delays can be introduced into an audio signal by use of a delay circuit. The Office Action further asserts that it would have been obvious to combine Preuss with Lam because the ordinary person skilled in the art would have been motivated to add the delay circuit to compensate for delays introduced by the LPC analysis 88 of Fig. 5(b) of Lam. But, there is a presumption that Fig. 5(b) does operate properly, since every patent is presumed valid under 35 U.S.C. 282, and that presumption includes the presumption of operability (*Metropolitan Eng. Co. v. Coe*, 78 F.2d 199, 25 USPQ 216 (D.C.Cir. 1935) and MPEP 716.07); therefore, one skilled in the art would not be motivated to modify Fig. 5(b) by adding additional delays to “compensate” for delays introduced by the LPC analysis 88 of Fig. 5(b) of Lam, since Fig. 5(b) is presumed operable.

Further, the Office Action modifies Lam with Preuss only by delaying the original audio signal, s(n), prior to input to element 104 of Fig. 5(b) of Lam. But, the delay in the claimed invention is not a way to compensate for a delay due to processing steps. The delay in the claimed invention is for “combining the original audio signal and the echo signal of the original audio signal having copyright information therein,” where the “echo signal” is “synthesizing the

prediction coefficient of the original audio signal and the residual signal of the delayed original audio signal” (amended claim 1.) Therefore, Applicants respectfully assert that both Lam and Preuss are silent with regards to the limitation in claim 1 of using a “delayed version of the original audio signal.” Finally, the combination of Preuss with Lam would render Lam inoperable for its intended purpose as the combination would encode the auxiliary information in an echo signal which is not the intent of Lam (Lam col. 9, lines 43-53). A proposed modification cannot render the prior art invention being modified unsatisfactory for its intended purpose. (*In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) and MPEP 2143.02). For at least the reasons stated above, Applicants respectfully submit that there is no proper motivation to combine Preuss with Lam, and that the combination of Preuss with Lam does not teach the claimed invention of Application.

The Office Action states on page 3 that the limitation in claim 1 of “an echo signal generation means for generating an echo signal of the original audio signal by synthesizing the prediction coefficient of the original audio signal and the residual signal of the original audio signal” is taught in Lam at Col. 9 Lines 43-48 and Element 94 of Fig. 5(b). But the output of Element 94 of Fig. 5(b) of Lam includes the copyright information. Because Lam includes the copyright information as an output and the claimed invention does not, Applicants assert that Lam does not teach the limitation in claim 1 of “an echo signal generation means for generating an echo signal of the original audio signal by synthesizing the prediction coefficient of the original audio signal and the residual signal of the original audio signal.”

The Office Action states on pages 2-3 that the limitation of claim 1 of “a residual signal output means for outputting a residual signal of a delayed version of the original audio signal by filtering the delayed version of the original audio signal using the prediction coefficient generated from the linear prediction analysis means” is taught by Lam Col. 8 Line 6 through Col. 9 Line 4. But, Lam summarizes the output of the alleged “residual signal output means” as “The LPC prediction filter 104 [of Fig. 5(b)] implements the transform function  $A(z)$  which is essentially the inverse of the spectrum of  $s(n)$  [audio signal].” But, Application describes the output of the “residual signal output means” as “the inputted audio signal is filtered using the prediction coefficient to estimate the inherent spectrum of the audio signal so that a residual signal or an error signal, in which the inherent spectrum of the audio signal is eliminated, may be outputted.” (Application, page 9, lines 8-12). So the output of the alleged Lam residual signal output means

is the inverse of the spectrum of the audio signal whereas in Application the output of the residual signal output means is a residual signal where the inherent spectrum of the audio signal is eliminated.

Therefore, Applicants contend that the limitation “a residual signal output means for outputting a residual signal of a delayed version of the original audio signal by filtering the delayed version of the original audio signal using the prediction coefficient generated from the linear prediction analysis means” is not taught in Lam.

The Office Action states on page 3 that the limitation “and a copyright information insertion means for generating a watermarked audio signal by combining the original audio signal and the echo signal of the original audio signal having copyright information therein” is taught by Lam at Fig. 5(b) Element 100 and col. 9, lines 49-53. But,  $d(n)$  the input to Element 100 of Fig. 5(b) of Lam is not an “echo signal”. The “echo signal” is “synthesizing the prediction coefficient of the original audio signal and the residual signal of the delayed original audio signal.” (Amended claim 1). Therefore, the echo signal is delayed, but  $d(n)$  of Lam is not a delayed signal (see Lam col. 9, lines 43-61). Therefore, Applicants contend that the limitation “and a copyright information insertion means for generating a watermarked audio signal by combining the original audio signal and the echo signal of the original audio signal having copyright information therein” is not taught in Lam.

The rejection of claim 9 is traversed for similar reasons as stated above for claim 1. Because claims 2 and 4-8 depend from claim 1 and claims 10 and 12-14 depend from claim 9, Applicant respectfully traverses the rejections for claims 2 and 4-8, and for claims 10 and 12-14 for the same reasons as given above for claims 1 and 9.

**CONCLUSION**

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice to that effect is solicited.

Should any questions remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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